

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all previous versions and listings of claims in this application.

Claim Listing:

1. (Currently amended) A microwave transition comprising:

a waveguide of rectangular section, said waveguide having ~~a narrow wall and a broad wall;~~ two narrow walls and two broad walls;

a radiating face provided by a first of said two narrow walls;

a first conductor extending through ~~said narrow wall~~ a second of said two narrow walls;
and

a transition plate attached with said first conductor within said waveguide,

wherein said transition plate is aligned centrally of said waveguide and extends lengthwise in contact with an internal surface of ~~said broad wall~~ one of said two broad walls parallel to said radiating face, and

wherein the height of said transition plate is greater adjacent said first conductor than away from said first conductor.

2. (Currently amended) A microwave transition according to claim 1, wherein said transition plate is stepped to a reduced height away from said first conductor.

3. (Original) A microwave transition according to claim 2, wherein said transition plate provides a quarter wave section.

4. (Original) A microwave transition according to claim 1, wherein said transition plate tapers to a reduced height away from said first conductor.

5. (Original) A microwave transition according to claim 1, wherein a cylindrical outer conductor extends around a part of the length of said first conductor.

6. (Original) A microwave transition according to claim 5, including a dielectric member located between said first conductor and said outer conductor.

7. (Original) A microwave transition according to claim 1, wherein said first conductor comprises two parts arranged axially of one another, and wherein a dielectric material is supported between said two parts of said first conductor in a hole in said narrow wall.

8. (Currently amended) A microwave transition according to claim 1, wherein said first conductor has a portion extending parallel to ~~said narrow wall~~ one of said two narrow walls.

9. (Currently amended) A microwave transition comprising:

a waveguide of rectangular section, said waveguide having ~~a narrow wall and a broad wall~~ two narrow walls and two broad walls;

a radiating face provided by a first of said two narrow walls;

a first conductor extending through ~~said narrow wall~~ a second of said two narrow walls;
and

a transition plate attached with said first conductor within said waveguide,

wherein said transition plate has a flat edge and a stepped edge opposite said flat edge,

wherein said plate is aligned centrally of said waveguide and extends lengthwise with said flat edge in contact with an internal surface of ~~said broad wall~~ one of said two broad walls parallel to said radiating face, and

wherein the height of said transition plate steps down away from said first conductor.

10. (Currently amended) A microwave transition comprising:

a waveguide of rectangular section, said waveguide having ~~a narrow wall and a broad wall~~ two narrow walls and two broad walls;

a radiating face provided by a first of said two narrow walls;

a first conductor extending through ~~said narrow wall~~ a second of said two narrow walls and having a right-angle bend externally of the waveguide such that a free end of the first conductor extends parallel with ~~said narrow wall~~ two narrow walls; and

a transition plate attached with said first conductor within said waveguide,

wherein said transition plate is aligned centrally of said waveguide and extends lengthwise in contact with an internal surface of ~~said broad wall~~ one of said two broad walls parallel to said radiating face, and wherein the height of said transition plate is greater adjacent said first conductor than away from said first conductor.

11. (Currently amended) A microwave antenna including a transition comprising:

a waveguide of rectangular section, said waveguide having a ~~narrow wall and a broad wall~~ two narrow walls and two broad walls;

a radiating face provided by a first of said two narrow walls;

a first conductor extending through ~~said narrow wall~~ a second of said two narrow walls;

and

a transition plate attached with said first conductor within said waveguide,

wherein said transition plate is aligned centrally of said waveguide and extends lengthwise in contact with an internal surface of ~~said broad wall~~ one of said two broad walls parallel to said radiating face, and

wherein the height of said transition plate is greater adjacent said first conductor than away from said first conductor.

12. (Currently amended) A microwave antenna according to claim 11 including a slotted wall opposite said ~~narrow wall~~ radiating face and a ~~polarisation~~ polarization grid disposed adjacent said slotted wall externally of said waveguide.